

## EAST Search History

|     |     |   |   |    |     |                  |
|-----|-----|---|---|----|-----|------------------|
| S32 | 0   | S31 and ((reel\$3 shank spool\$3 wind\$3 tension\$3) near2 (element bar elongat\$3 member)) near8 ((plane axis line) and (rotat\$3 exten\$4 engag\$3 co\$1axi\$4) and (line wire cable cord)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:53 |
| S33 | 0   | S31 and ((reel\$3 shank spool\$3 wind\$3 tension\$3) near8 (element bar elongat\$3 member)) near4 ((plane axis line) and (rotat\$3 exten\$4 engag\$3 co\$1axi\$4) and (line wire cable cord)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:01 |
| S34 | 2   | S31 and (length (horizontal lateral) adj (dimension)) near6 ((shank reel shaft bar) and (diameter cross\$1section\$2) and (cable wire cord))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:11 |
| S35 | 0   | ("597426").URPN.  | USPAT   | OR | ON  | 2007/01/07 13:07 |
| S36 | 2   | S31 and (length (horizontal lateral) adj (dimension)) near6 ((shank reel shaft bar) and (diameter cross\$1section\$2))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:11 |
| S37 | 23  | S25 and (length (horizontal lateral) adj (dimension)) near6 ((shank reel shaft bar) and (diameter cross\$1section\$2))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:12 |
| S38 | 22  | S37 not S26   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:12 |
| S39 | 245 | (248/493).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/07 14:32 |
| S40 | 230 | S39 and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:51 |
| S41 | 20  | 24/554  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:50 |
| S42 | 186 | 40/757  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:51 |
| S43 | 89  | S42 and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:51 |
| S44 | 73  | S30 and (tighten\$3 tension\$3 reel\$3 wind\$3)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:53 |

# INTERFERENCE

## EAST Search History

| Ref # | Hits | Search Query  | DBs                             | Default Operator | Plurals | Time Stamp       |
|-------|------|---|---------------------------------|------------------|---------|------------------|
| L1    | 1    | ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times))).clm.   | US-PGPUB                        | OR               | ON      | 2007/06/10 19:30 |
| L2    | 0    | A01G017/04.ipc. and ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times)))  | EPO; JPO; DERWENT               | OR               | ON      | 2007/06/10 19:31 |
| L3    | 0    | F18G011/12.ipc. and ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times)))  | EPO; JPO; DERWENT               | OR               | ON      | 2007/06/10 19:31 |
| L4    | 0    | F18G011/12.ipc. and ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank shaft leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times)))  | EPO; JPO; DERWENT               | OR               | ON      | 2007/06/10 19:32 |
| L5    | 0    | F16G011/12.ipc. and ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank shaft leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times)))  | EPO; JPO; DERWENT               | OR               | ON      | 2007/06/10 19:41 |
| L6    | 0    | B65H075/38.ipc. and ((spool reel (wire\$1 cable\$1 cord\$1) adj (ac\$1um\$1ulat\$3 wind\$3)) and ((length (wind\$3 tak\$5 ac\$1m\$1lat\$3) adj span)) near10 ((diameter radius) and (shank shaft leg stem) and ("5" "8" "10" "12" "15" "17" "35" "40" "60" "55") adj (multiple factor times)))  | USPAT; USOCR; EPO; JPO; DERWENT | OR               | ON      | 2007/06/10 19:42 |
| S1    | 50   | ((("20050173583") or ("5209420") or ("5664739") or ("5927635") or ("20050274840") or ("4576586") or ("6139397") or ("5695147") or ("6678472") or ("20030175026") or ("4373457") or ("5194063") or ("4491052") or ("6142892") or ("20050207155") or ("5727981") or ("6132285") or ("20060065373") or ("3610612") or ("5246185") or ("5823343") or ("4333687") or ("6080002") or ("20060052188") or ("4552035") or ("6103349") or ("4249278") or ("4867403") or ("5718583") or ("4144641") or ("4170085") or ("4458934") or ("4557310") or ("4622910") or ("4815172") or ("4830244") or ("4932395") or ("4963095") or ("4995329") or ("5551500") or ("5575241") or ("5680890") or ("5927659") or ("6122858") or ("5670989") or ("5472257") or ("4794695") or ("6056036") or ("4927154") or ("5022577") or ("").pn.))).PN. | US-PGPUB; USPAT                 | OR               | OFF     | 2007/01/06 15:52 |
| S2    | 14   | ("0296196"   "0508732"   "3224754").PN. OR ("3610612").URPN.  | US-PGPUB; USPAT; USOCR          | OR               | ON      | 2007/01/06 15:56 |

## EAST Search History

|     |      |  |   |    |     |                  |
|-----|------|--|---|----|-----|------------------|
| S3  | 1078 | ((24/269,909) or (242/388.2,388.4)).CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/06 15:57 |
| S4  | 7    | ((("2,475,525") or ("2577299") or ("5,695,147") or ("4,041,992") or ("3,438,098") or ("5012559") or ("1792468"))).PN.  | USPAT   | OR | OFF | 2007/01/06 16:01 |
| S5  | 1078 | ((24/269,909) or (242/388.2,388.4)).CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/06 16:29 |
| S6  | 1053 | S5 and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/06 17:26 |
| S7  | 1    | ("2475525").URPN.  | USPAT   | OR | ON  | 2007/01/06 16:36 |
| S8  | 0    | ("2577299").URPN.  | USPAT   | OR | ON  | 2007/06/10 18:56 |
| S9  | 3    | ("1792468").URPN.  | USPAT   | OR | ON  | 2007/01/06 16:39 |
| S10 | 8    | S6 and ((reel\$3 shank spool\$3 wind\$3 tension\$3) near2 (element bar elongat\$3 member)) near8 ((plane axis line) and (rotat\$3 exten\$4 engag\$3 co\$1axi\$4) and (line wire cable cord)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:00 |
| S11 | 20   | ("0515340"   "1257827"   "1320882"   "1339601"   "1397976"   "1702340"   "2635451").PN. OR ("3879805").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | ON  | 2007/01/06 17:03 |
| S12 | 62   | S6 and (reel\$3 shank spool\$3 wind\$3 tension\$3) near8 ((plane axis line) and (rotat\$3 exten\$4 engag\$3 co\$1axi\$4) and (line wire cable cord))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/06 17:07 |
| S13 | 61   | S12 not S11  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/06 17:07 |
| S14 | 20   | ("0515340"   "1257827"   "1320882"   "1339601"   "1397976"   "1702340"   "2635451").PN. OR ("3879805").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | ON  | 2007/01/06 17:10 |
| S15 | 1    | ("2731691").URPN.  | USPAT   | OR | ON  | 2007/01/06 17:12 |
| S16 | 3    | ("1792468").URPN.  | USPAT   | OR | ON  | 2007/01/06 17:23 |
| S17 | 0    | A44B.ipc.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/06 17:26 |
| S18 | 199  | (242/588.2).CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/06 17:26 |
| S19 | 150  | S18 and @pd<"20020423"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:43 |

## EAST Search History

|     |      |   |   |    |     |                  |
|-----|------|---|---|----|-----|------------------|
| S20 | 1078 | ((24/269,909) or (242/388.2,388.4)).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/07 12:42 |
| S21 | 199  | (242/588.2).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/07 12:46 |
| S22 | 1203 | (S20 S21) and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:59 |
| S23 | 2    | S22 and (length (horizontal lateral) adj (dimension)) near6 ((shank reel shaft bar) and (diameter cross\$1section\$2) and (cable wire cord))    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:50 |
| S24 | 1546 | (242/366.2,395,404.3,579,597).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/07 12:47 |
| S25 | 1461 | S24 and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:47 |
| S26 | 1    | S25 and (length (horizontal lateral) adj (dimension)) near6 ((shank reel shaft bar) and (diameter cross\$1section\$2) and (cable wire cord))    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 13:11 |
| S27 | 3    | S22 and (length (horizontal lateral) adj (dimension)) near8 ((shank reel shaft bar) and (diameter cross\$1section\$2) and (cable wire cord))    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:51 |
| S28 | 1    | S22 and (length (horizontal lateral) adj (dimension)) near10 ((shank reel shaft bar) and (diameter cross\$1section\$2) near6 (cable wire cord)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:51 |
| S29 | 5    | S22 and (shank reel shaft bar) near8 ((diameter cross\$1section\$2) near4 (cable wire cord))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 12:58 |
| S30 | 520  | (248/492,493,495).CCLS.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2007/01/07 14:32 |
| S31 | 487  | S30 and @pd<"20020423"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON  | 2007/01/07 14:32 |